

McIntosh

**MC 2100**  
POWER AMPLIFIER



**SERVICE INFORMATION**

STARTING WITH SERIAL NO. 10W01

McINTOSH LABORATORY INC. 2 CHAMBERS STREET BINGHAMTON, NEW YORK

MC 2100

**PERFORMANCE**

McIntosh audio power ratings are in accordance with the Federal Trade Commission Regulation of November 4, 1974 concerning power output claims for amplifiers used in home entertainment products.

**POWER OUTPUT****STEREO**

105 watts minimum sine wave continuous average power output, per channel, both channels operating into 4 ohms, 8 ohms, or 16 ohms load impedance, which is:

20.5 volts RMS across 4 ohms

29.0 volts RMS across 8 ohms

41.0 volts RMS across 16 ohms

**MONO**

210 watts minimum sine wave continuous average power output, operating into 2 ohms, 4 ohms, or 8 ohms load impedance, which is:

20.5 volts RMS across 2 ohms

29.0 volts RMS across 4 ohms

41.0 volts RMS across 8 ohms

**OUTPUT LOAD IMPEDANCE****STEREO**

4 ohms, 8 ohms, or 16 ohms; separate terminals are provided for each output

**MONO**

2 ohms, 4 ohms, 8 ohms; separate terminals are provided for each output

**RATED POWER BAND**

20 Hz to 20,000 Hz

**TOTAL HARMONIC DISTORTION****STEREO**

0.25% maximum harmonic distortion at any power level from 250 milliwatts to 105 watts per channel from 20 Hz to 20,000 Hz, both channels operating

**MONO**

0.25% maximum distortion at any power level from 250 milliwatts to 210 watts from 20 Hz to 20,000 Hz

**FREQUENCY RESPONSE (at 1 watt output)**

20 Hz to 20,000 Hz +0 -0.25 dB

10 Hz to 100,000 Hz +0 -3.0 dB

**INTERMODULATION DISTORTION****STEREO**

0.25% if instantaneous peak power output is 210 watts or less per channel with both channels operating for any combination of frequencies, 20 Hz to 20,000 Hz

**MONO**

0.25% if instantaneous peak power output is 420 watts or less per channel with both channels operating for any combination of frequencies, 20 Hz to 20,000 Hz

**NOISE AND HUM**

90 dB below rated output

**RATINGS****OUTPUT VOLTAGES****STEREO AND MONO**

25 volts for distribution lines

**DAMPING FACTOR**

20 at 4 ohms output

14 at 8 ohms output

11 at 16 ohms output

**INPUT IMPEDANCE**

200,000 ohms

**INPUT SENSITIVITY**

0.5 volt. Level control provided for higher input voltage

**GENERAL INFORMATION****POWER REQUIREMENTS**

120 volts, 50/60 Hz, 75 watts at zero signal output, 430 watts at rated output

**SEMICONDUCTOR COMPLEMENT**

32 silicon transistors

14 rectifiers & diodes

**MECHANICAL INFORMATION****SIZE**

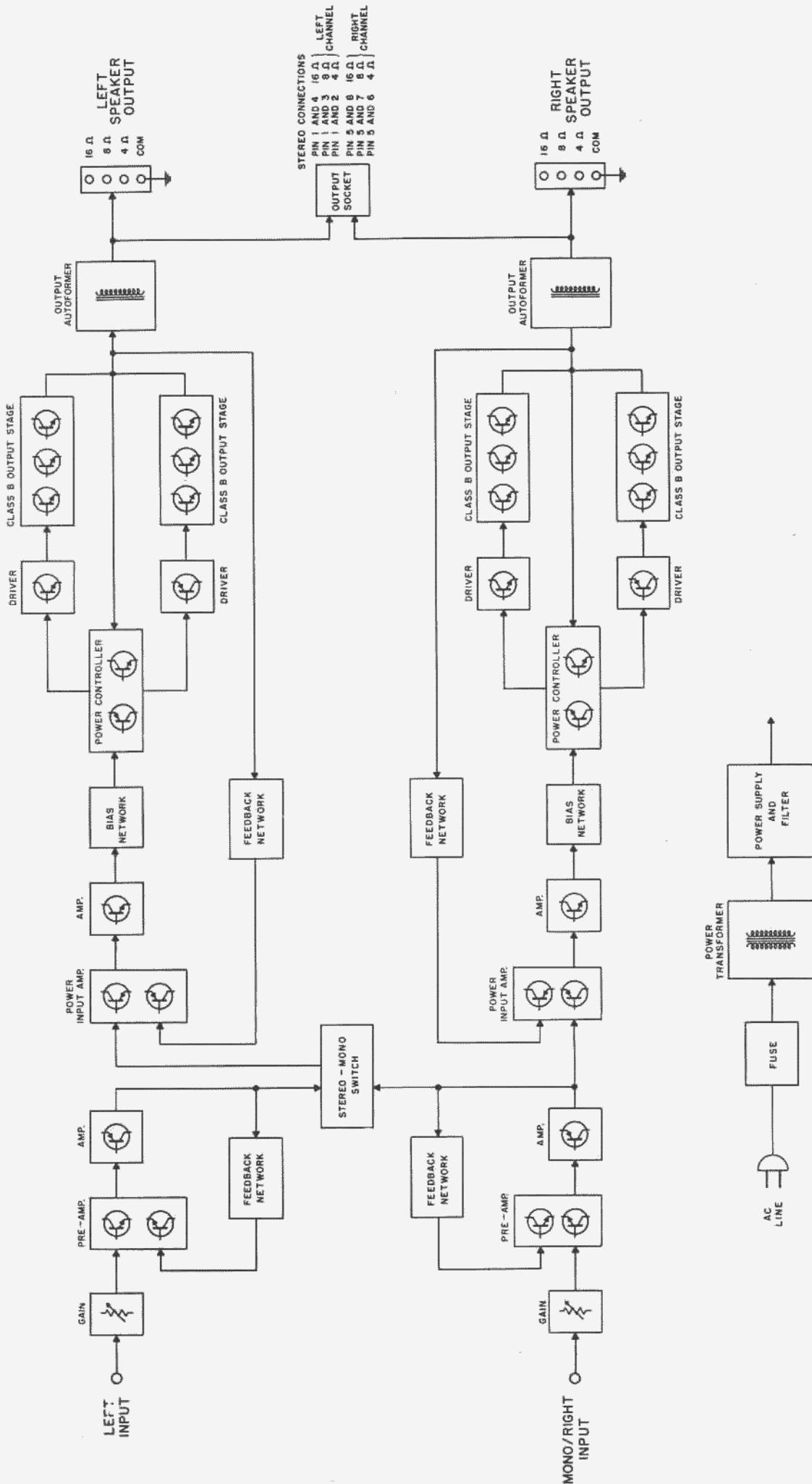
7 3/4 inches high (19.69 cm), 11 3/4 inches wide (29.85 cm), 17 inches deep (43.18 cm)

**CHASSIS**

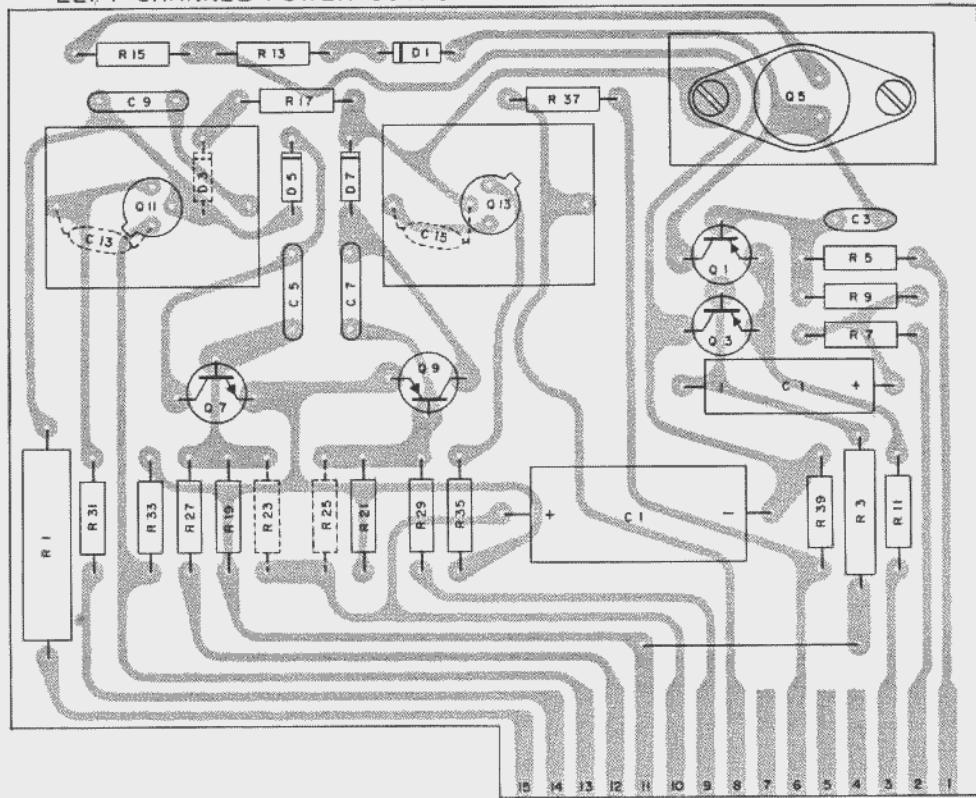
Chrome and black

**WEIGHT**

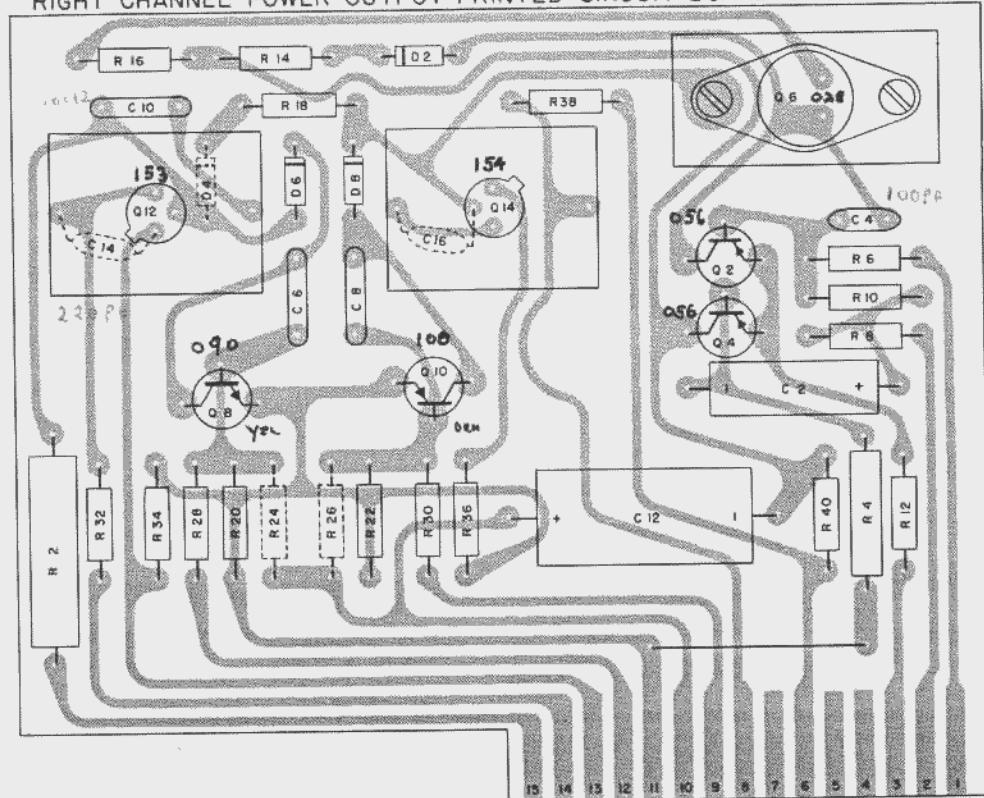
57 pounds (25.86 kg) net, 63 pounds (28.58 kg) in shipping carton



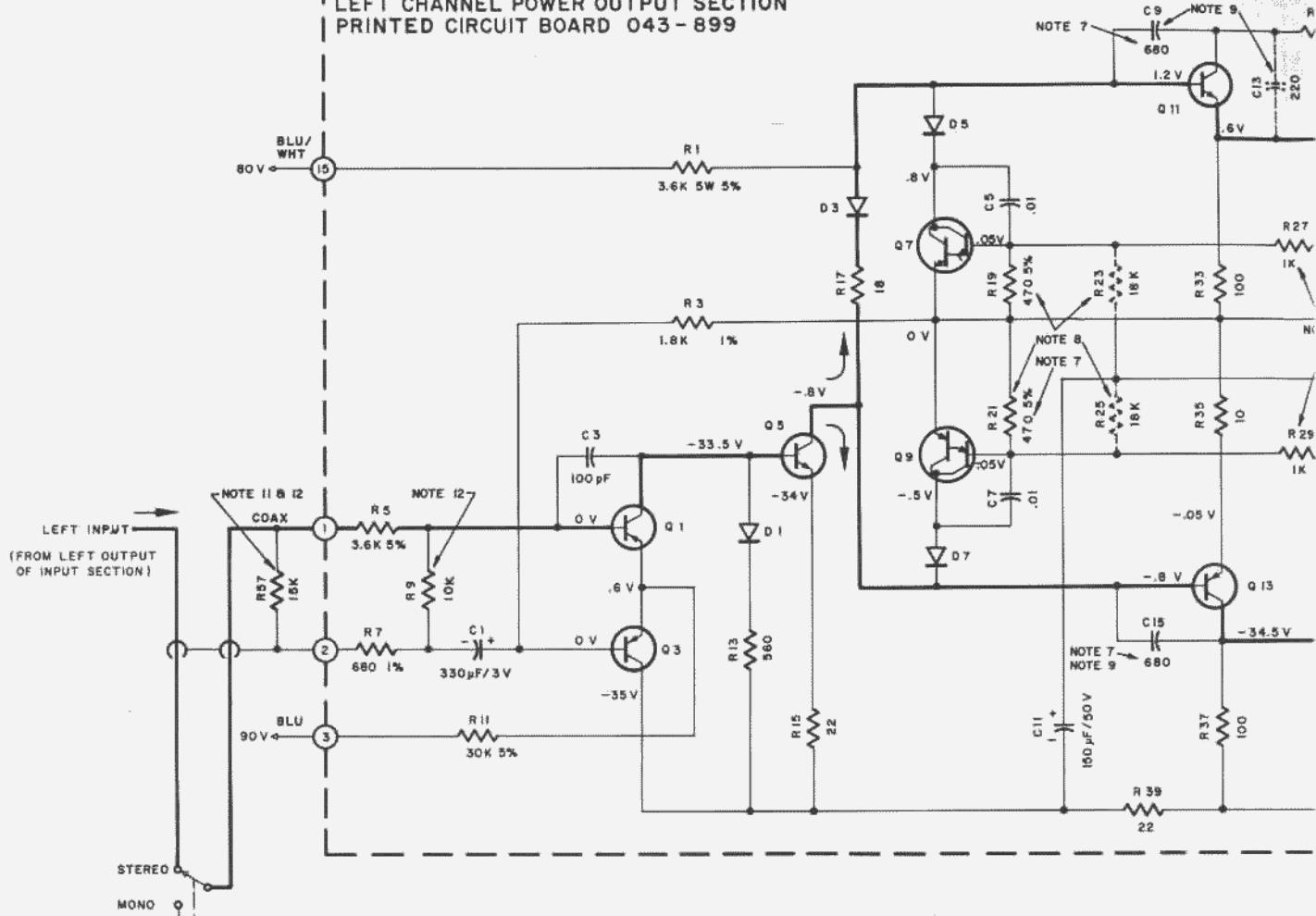
LEFT CHANNEL POWER OUTPUT PRINTED CIRCUIT BOARD 043-899



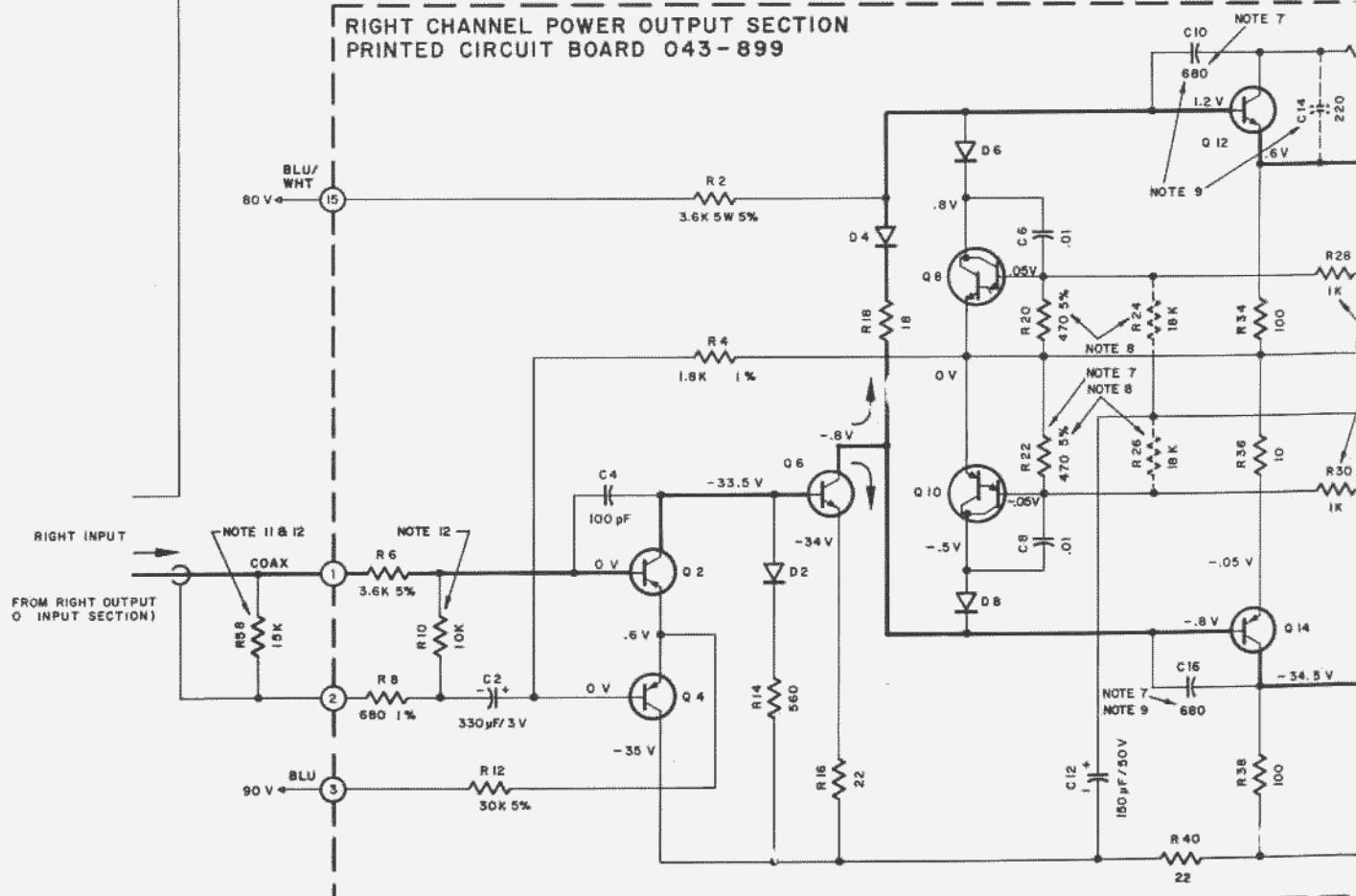
RIGHT CHANNEL POWER OUTPUT PRINTED CIRCUIT BOARD 043-899

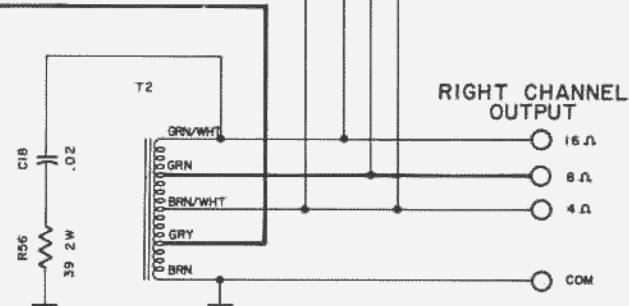
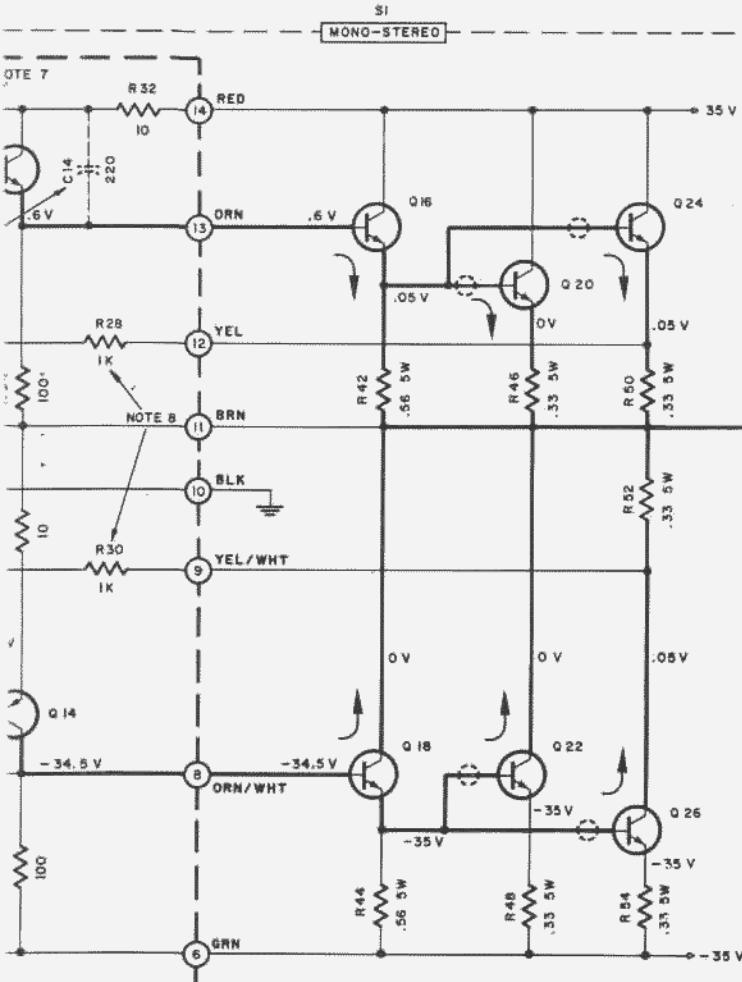
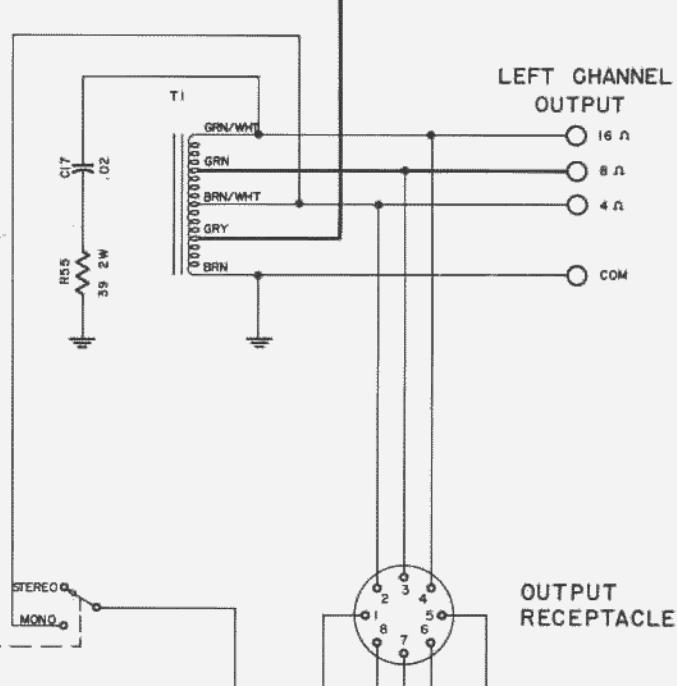
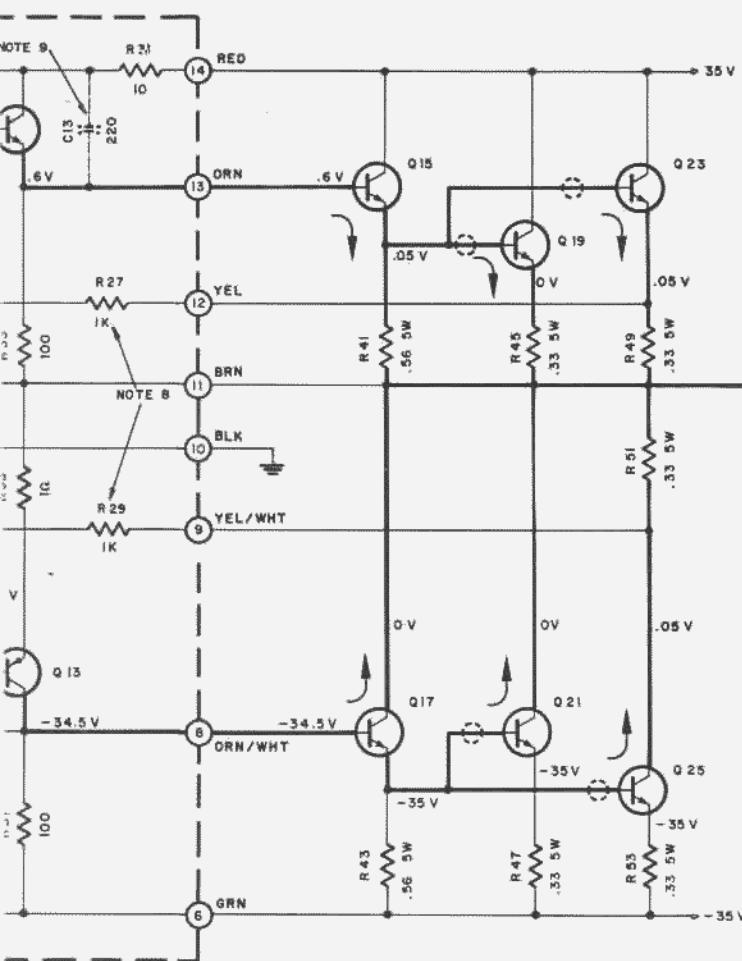


LEFT CHANNEL POWER OUTPUT SECTION  
PRINTED CIRCUIT BOARD 043-899

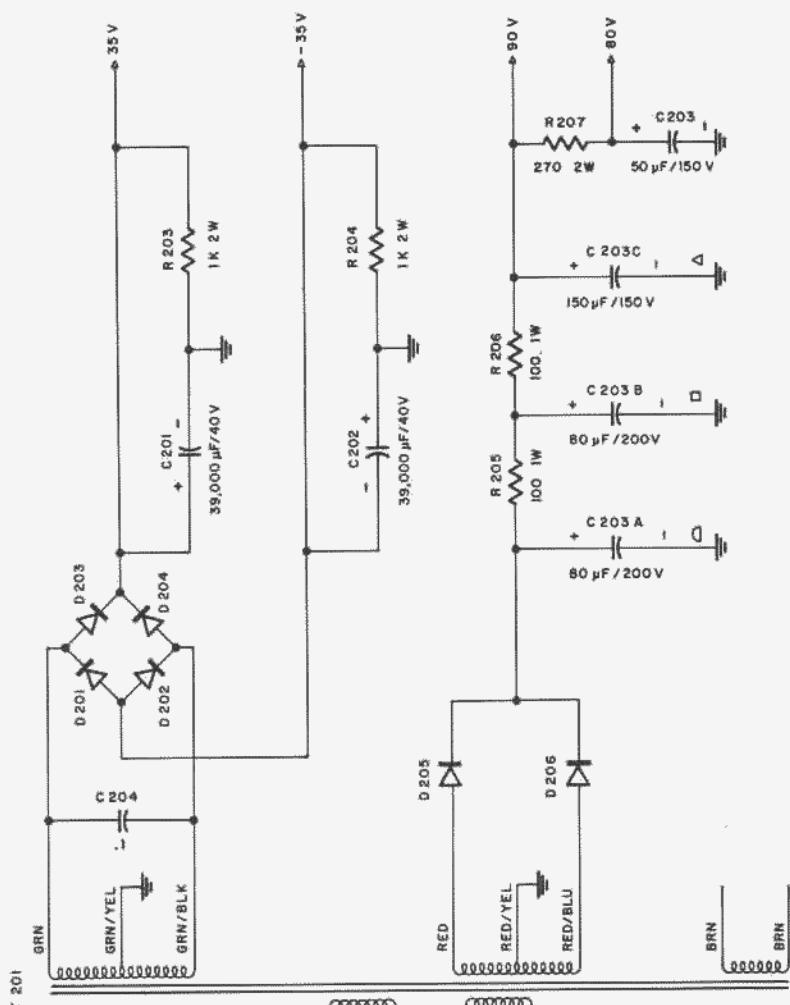


RIGHT CHANNEL POWER OUTPUT SECTION  
PRINTED CIRCUIT BOARD 043-899





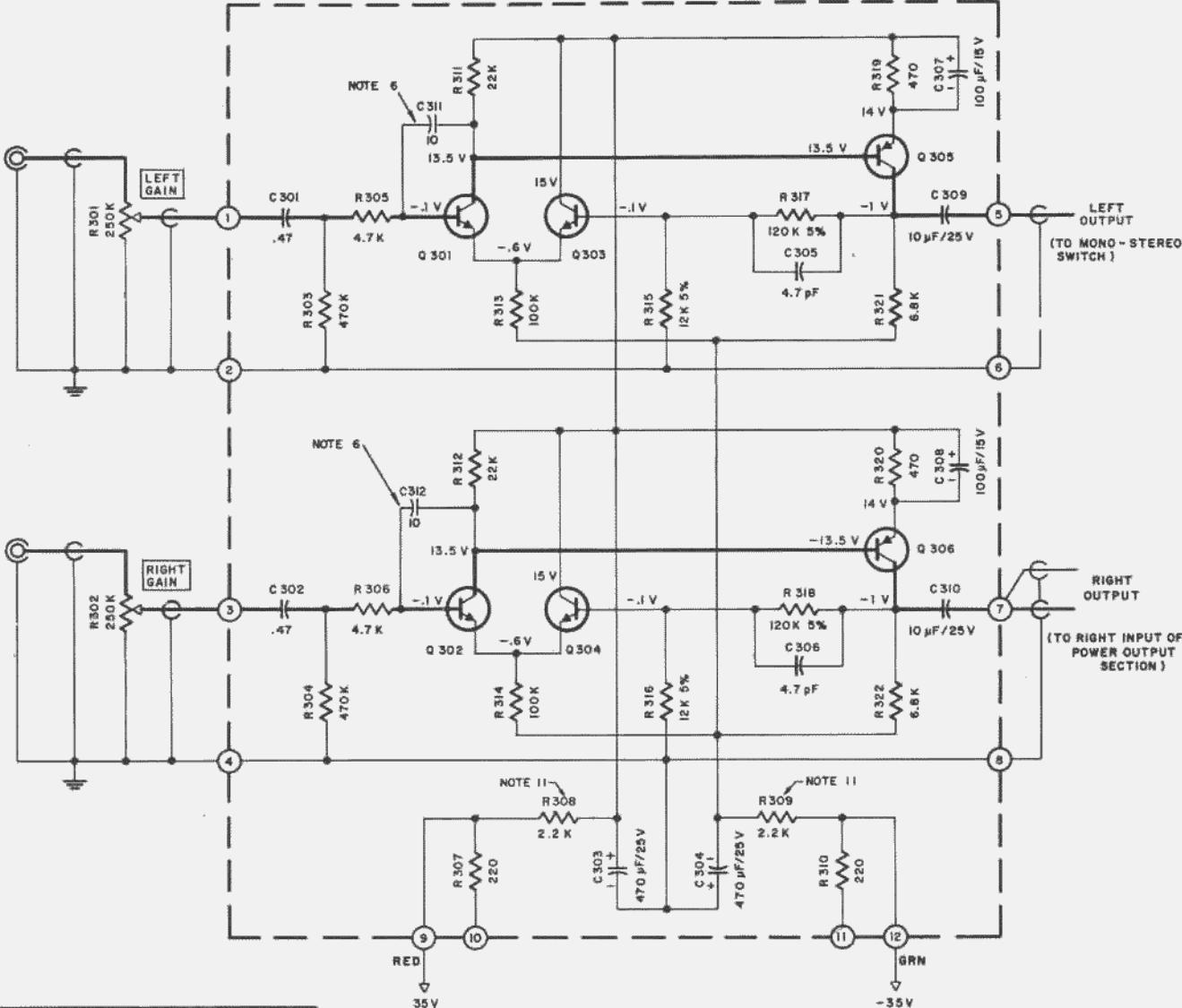
POWER OUTPUT SECTION



POWER SUPPLY  
SECTION

MC 2100 154-659

## INPUT SECTION PRINTED CIRCUIT BOARD 043 - 795

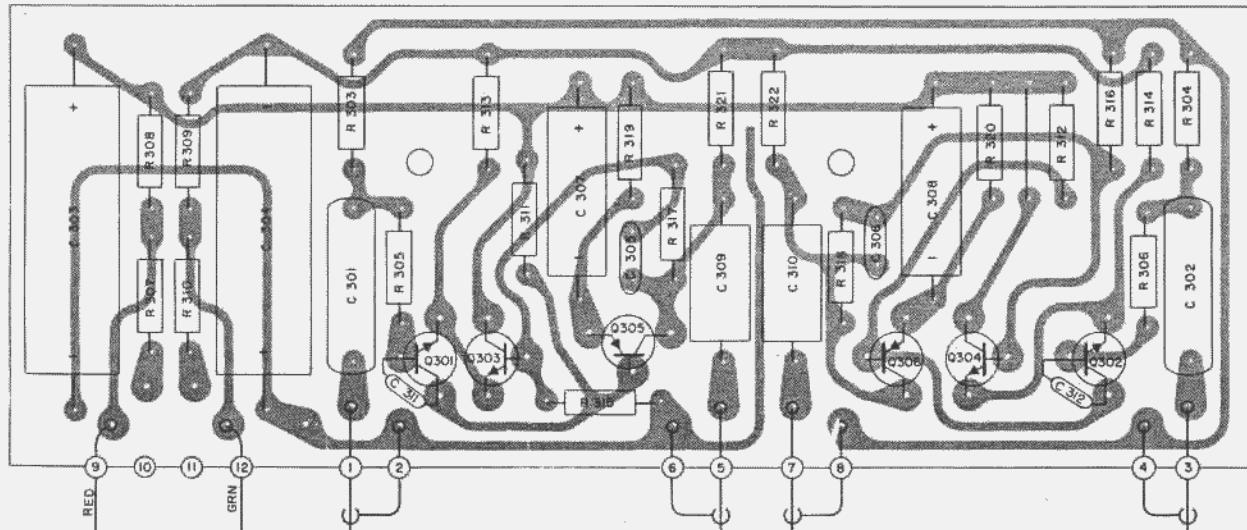
LEFT  
INPUT

## INPUT SECTION

MC 2100

154-660

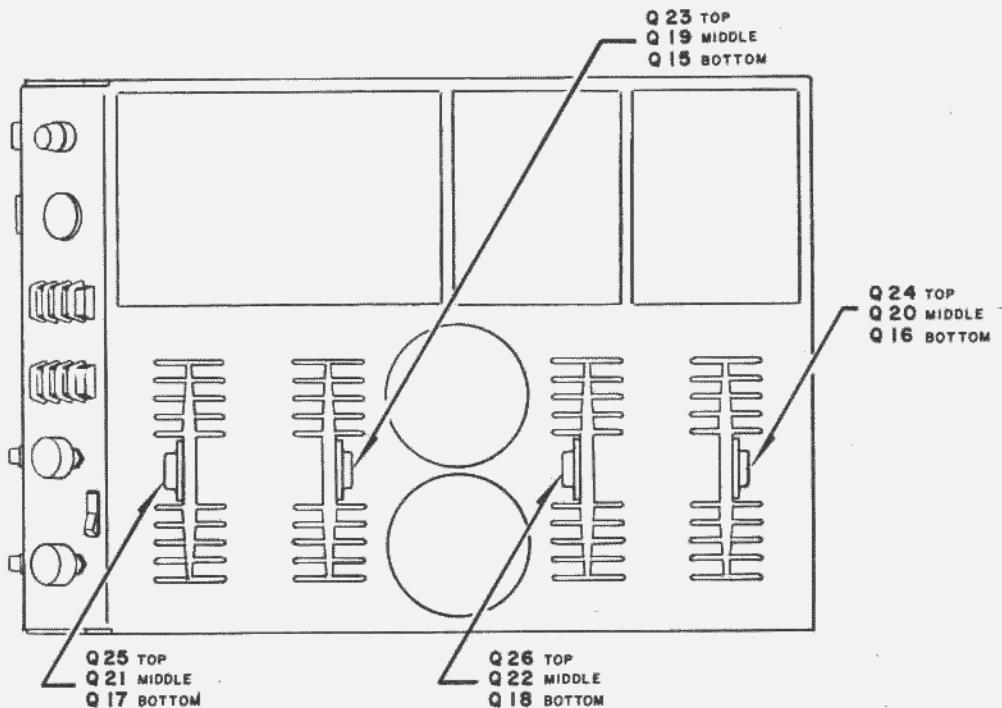
## INPUT SECTION PRINTED CIRCUIT BOARD 043 - 795



## SCHEMATIC NOTES

- Unless otherwise specified: Resistance values are in ohms, 1/2 watt, and 10% tolerance; capacitance values smaller than 1 are in microfarads ( $\mu$ F); capacitance values greater than 1 are in picofarads (pF); inductors are in microhenries ( $\mu$ H).
- Printed circuit board components are outlined on the schematics by dotted lines. The circled numbers on the dotted lines correspond to the numbers on the PC board layouts.
- The heavy lines on the schematics denote the primary signal path.
- The terminal numbering of rotary switches is for reference only.
- All voltages indicated on the schematics are measured under the following conditions:
  - Use of an 11 megohm impedance VTVM.
  - All voltages  $\pm$  10% with respect to chassis ground.
  - No signal at input terminals.
  - AC input at 117 volts AC, 50/60Hz.
  - Front panel controls at: Left Gain      FULL CCW  
Right Gain      FULL CCW  
Mode      STEREO
- In units with Serial No.'s below 10W84, C311 & C312 are not used.
- In units with Serial No.'s below 13W25: R21 & R22 are 120 $\Omega$  and C9, C10, C15, & C16 are 680pF.
- In units with Serial No.'s below 59W75: R27, R28, R29 & R30 are 100 $\Omega$ ; R19 & R20 are 120 $\Omega$ ; R21 & R22 are 150 $\Omega$  and R23, R24, R25 & R26 are used.
- In units with Serial No.'s below 99W26: C13 & C14 are used; R17 and R18 are 22 $\Omega$  and C9, C10, C15 & C16 are .0012 $\mu$ F.
- In units with Serial No.'s below 99W26 F202 is not used.
- In units with Serial No.'s below 86W06: R55 & R56 are 10K and R308 & R309 are 3.3K.
- In units with Serial No.'s below 86W00: R9 & R10 are 3.3K and R33 & R56 are not used.

## LOCATION OF TRANSISTORS NOT ON PRINTED CIRCUIT BOARDS



## REPLACEMENT PARTS

All parts not listed are common items obtainable from radio parts jobbers.

Replacement parts may be obtained when ordered by PART NUMBER from:

McIntosh Laboratory, Inc.  
Customer Service Department  
2 Chambers Street  
Binghamton, New York 13903  
(telephone 607-723-3512)

## CAPACITORS

Symbol Number	Description			Part Number
C1,2	Elect.	330 $\mu$ F	3V	066-105
C11,12	Elect.	150 $\mu$ F	63V	066-205
C201,202	Elect.	39000 $\mu$ F	40V	066-119
C203	Elect.	80/80/150/50 $\mu$ F 200/200/150/150V		066-095
C301,302	Mylar	.47 $\mu$ F	250V	064-045
C303,304	Elect.	470 $\mu$ F	25V	066-228
C307,308	Elect.	100 $\mu$ F	12V	066-227
C309,310	Elect.	10 $\mu$ F	25V	066-222

## DIODES

D1,2	Si. signal diode	070-047
D3,4	Bias diode	070-046
D5,6	Si. signal diode	070-047
D7,8	Si. signal diode	070-047
D201,202	Si. rectifier	070-038
D203,204	Si. rectifier	070-039
D205,206	Si rectifier	070-031

## FUSES

F201	Fuse 5 amp, slo-blo	089-007
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## TRANSISTORS

Q1,2	Si. PNP transistor	132-056
Q3,4	Si. PNP transistor	132-056
Q5,6	Si. NPN transistor	132-028
Q7,8	Si. NPN transistor	132-090
Q9,10	Si. PNP transistor	132-100
Q11,12	Si. NPN transistor	132-153
Q13,14	Si. PNP transistor	132-154
Q15,16	Si. NPN transistor	132-070
Q17,18	Si. NPN transistor	132-070
Q19,20	Si. NPN transistor	132-070
Q21,22	Si. NPN transistor	132-070
Q23,24	Si. NPN transistor	132-070
Q25,26	Si. NPN transistor	132-070

Q301,302	Si. NPN transistor	132-092
Q303,304	Si. NPN transistor	132-092
Q305,306	Si. PNP transistor	132-056

## POTENTIOMETERS

R301	Left gain	134-206
R302	Right gain	134-206

## RESISTORS

R1,2	Wirewound	3.6k	5W	139-096
R41,42	Wirewound	.56 $\Omega$	5W	139-081
R43,44	Wirewound	.56 $\Omega$	5W	139-081
R45,46	Wirewound	.33 $\Omega$	5W	139-080
R47,48	Wirewound	.33 $\Omega$	5W	139-080
R49,50	Wirewound	.33 $\Omega$	5W	139-080
R51,52	Wirewound	.33 $\Omega$	5W	139-080
R53,54	Wirewound	.33 $\Omega$	5W	139-080
R201,202	Thermistor			144-012

## SWITCHES

S1	Mode selector	153-008
S201,202	Thermal cut-out	153-007

## TRANSFORMERS

T1,2	Audio autoformer	043-694
T201	Power transformer	043-693

## MISCELLANEOUS ITEMS

Plastic feet	017-144
Owners manual	038-848
Gain control knob	090-017
Shipping carton	033-099
AC power cord	170-021
Fuseholder	178-001